

ON MAMMALS COLLECTED BY MR. ALBERT MEEK
ON WOODLARK ISLAND, AND ON KIRIWINA IN THE TROBRIAND
GROUP.

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MR. ALBERT MEEK has continued his explorations of the islands east of New Guinea by making collections on two islands hitherto entirely unvisited by mammal collectors. The most interesting of these is Woodlark Island, situated east of the D'Entrecasteaux group, towards the Solomons, where he found a new *Cuscus* and a new bat, while on Kiriwina he found a new subspecies of the *Cuscus* genus besides several other animals of interest.*

The present paper contains an account of all the mammals obtained at the two islands, and may be considered as a continuation of that on his Fergusson Island mammals, published in the *NOVITATES* for 1895.†

Specimens of most of the species referred to are in both the Tring and British Museums.

1. *Pteropus conspicillatus* Gould.

Kiriwina Island. Many specimens.

"Eyes hazel."—A. S. M.

There is considerable variation among the specimens in the extent and definition of the light rings round the eyes.

2. *Pteropus hypomelanus* Temm.

Kiriwina Island.

"Eyes hazel."

3. *Cephalotes peronii* Geoff.

Kiriwina Island.

"Eyes hazel."

4. *Harpyia major* Dobs.

Kiriwina and Woodlark Islands.

"Eyes hazel."

5. *Carponycteris crassa* Thos.

Kiriwina and Woodlark Islands.

6. *Hipposiderus tricuspatus* Temm.

Woodlark Island.

7. *Hipposiderus cervinus* Gould.

Kiriwina Island.

8. *Emballonura nigrescens* Gray.

Woodlark Island.

* For lists of ornithological collections made in these islands, see *antea*, pp. 234-251

† *Nov. Zool.* II, p. 163 (1895).

9. *Emballonura meeki* sp. nov.

a-c. Three males. Kiriwina Island.

Small *Emballonura* with very lobate lips, widely separated nostrils, and lower incisors divided from canines.

Muzzle obtuse, the tip scarcely projecting beyond the lower lip. Nostrils narrow, oblique, widely separated, their inner margins notched. Lips much produced laterally, the lower ones especially widely expanded into broad thin lobes. Front of lower lip with a broad groove, margined by thickened ridges. Ears narrow, pointed; their inner margins slightly but irregularly convex; tip narrowly rounded off, with a slight concavity just below; a small projection opposite the base of the tragus; basal lobule running forward to below the angle of the mouth. Tragus not unlike that of *E. semicaudata*, slightly expanded above, its outer margin straight, its inner faintly concave; a distinct projection at its outer base.

Wings from the metatarsi. Calcars as long as the tibiae.

Upper incisors small, in pairs on each side of a space equal to their distance from one another; more widely separated from the canines. Anterior upper premolar minute, close behind the canine. Lower incisors in a group in the front of the jaw, separated from the canines. Anterior lower premolar half the height of the canine and second premolar, which equal each other.

Dimensions of the type, an adult male:—Forearm 38 mm. Head and body 40; tail 11.5; ear 13.5; tragus on inner margin 2.6; thumb including claw 6.4; tibia 14.6; hind-foot 6; calcar 13.5; length of interfemoral in middle line 29.

Type: Brit. Mus. 96.10.5.12.

This species is widely distinct from any of the species described in Dobson's Catalogue, and does not indeed fall into either of the two groups he recognises. For by its separated nostrils it belongs to "*Mosia*," while its anteriorly grouped lower incisors bring it into the subgenus *Emballonura*. The obtuse muzzle, the wide lobes to the lower lips, and the pointed ears will also readily separate it from the two species, *E. raffrayana* Dobs. and *E. beccarii* Pet. & Dor., described since the appearance of the Catalogue.

10. *Mus browni* Alst. (?).

Woodlark Island.

This is the most natural species to find in Woodlark Island, as it occurs all over the Papuan Archipelago. Several names have been applied to forms belonging to the same group, but whether any or all of these are valid cannot be now determined for want of material. The Pacific Rat (*Mus exulans*) and the Maori Rat (*Mus maorium*) are both near allies to the present animal.

11. *Macropus agilis* Gould (?).

Two young specimens. Kiriwina Island.

These specimens are rather browner than usual, but, so far as can be made out on such young specimens, agree in all essential particulars with Papuan examples of Gould's species.

12. *Petaurus breviceps papuanus* Thos.

Several specimens. Fergusson Island.

13. *Phalanger lullulae* * sp. nov.

Many specimens. Woodlark Island.

A small *Cuscus* of the *Ph. orientalis* group, spotted with white as in *Ph. ornatus*, but without rufous on forequarters or belly.

Size small, barely exceeding that of *Ph. breviceps*. Sexes almost exactly alike, both in size, coloration, and even in the cranial characters. Ears small, rounded, not so absolutely naked inside as is normal in the group, as there are a few thinly scattered hairs on the internal surface of the ear-couch; nothing like, however, the thick hairiness found in the *Ph. maculatus* group. Fur very close and woolly. General colour (of both sexes) dull brown, irregularly mottled with spots of yellow or white, which increase in number on the sides and belly, so that the latter may be said to be white mottled with brown.

Chest and inner sides of limbs more white, but in the *female* the dark predominates on the lower part of the belly and inner sides of the hind-limbs. Throughout, however, the mottling is so irregular that no exact description can be drawn up. A dark nuchal or dorsal streak present, but very irregular, most distinct on the crown. Tail rather more than a third hairy above, the difference between the upper and lower extension of the fur rather less than two inches. Mammary four.

Skull on the whole very like that of *Ph. orientalis*, but the zygomatics distinctly converge forwards, so that there is a sort of elbow at their hinder ends, just external to the glenoid fossae, and at this point the zygomatic breadth is decidedly greater than in front. The supraorbital crests are rather intermediate in character between those of *Ph. orientalis* and *Ph. breviceps*, more transversely developed than in the latter, less than in the former. Nasal notch deeper than in *Ph. orientalis*, almost as in *Ph. ornatus*.

Teeth apparently as usual, the upper canines pressed close against i^3 , not separated as in *Ph. ornatus*. In all of the three skulls examined there are only two upper premolars, no small teeth being present between the usual anterior and posterior ones; below, the greatest number of the small intermediate teeth present is three.

Dimensions of the type, an adult *male*, in skin:—Head and body 375; tail 275; hind-foot 51. A specimen in spirit has the ear 21.5 and lower leg 84 mm.

Skull: basal length 68; greatest breadth 48.5; nasals, length 28, greatest breadth 11; interorbital breadth 12.2; intertemporal constriction 8.3; palate length 41; palatal foramen 5.6. Teeth, horizontal length of $\underline{p^1}$ 4.6; length of ms^{1-3} 13.

Type: Brit. Mus. 96.11.5.24. Paratypes in British and Tring Museums.

It is difficult to decide whether this very distinct *Cuscus* is most nearly allied to *Ph. orientalis* or *Ph. ornatus*. It resembles the latter in its white spotting and deeper nasal notch, but is without any trace of the handsome rufous or orange on the forequarters and belly, and its canine is as in *Ph. orientalis*. Its supraorbital ledges also have more resemblance to those of *Ph. orientalis* than to the very remarkable ones of *Ph. ornatus*.

14. *Phalanger orientalis kiriwiniae* subsp. nov.

Many specimens. Kiriwina Island, Trobriand group.

Closely allied to the Fergusson Island subsp. *intercastellanus*, but rather larger, and with a different structure of the interorbital region.

* Lullula, a woodlark.

In this form the adult *female* is a pale silvery grey all over above, while below the belly is only a little paler, and there is no defined white middle part to the belly as there is in New Guinea examples of subsp. *typicus*. The dorsal line is strongly marked, and there is a yellowish suffusion on the fore-back on each side of the line, and also on the rump just at the root of the tail. Young specimens are similar, and so are the young *males*, but in the latter sex as the animal gets older the general colour gets paler,* first anteriorly and then throughout, until it is almost white, with just a thin sprinkling of darker hairs among the white. The old *male* in the Tring Museum represents this last stage. The dorsal line still remains conspicuous, which is not the case in the well-known albinistic examples of this species. Also in adult and old *males* the underside of the neck gradually gets suffused with rufous brown, probably glandular in its origin.

The series brought home by Mr. Meek is very interesting as showing the way in which, while the *females* always retain their grey colour, the *males*, which are at first like the *females*, gradually become in age quite different.

The single specimen of subsp. *intercastellanus* available is a very old *male*, older than any of the examples of *kiriwinæ*, but its general colour is still greyish, and it has no trace of the glandular darkening on the throat.

The skull of *kiriwinæ* is longer and rather slenderer than that of *intercastellanus*, and has a much narrower interorbital and intertemporal region, which is especially noticeable as this part becomes narrower with age, and the type of *intercastellanus* is extremely old. The postorbital processes do not overhang the orbits so far laterally, but seem to be situated farther forwards as compared to the brain-case. Another curious peculiarity present in all the specimens is that the zygomata are bowed inwards anteriorly opposite the ascending portion of the malar, so as to form a distinct concavity in their outline at this point. In the two Tring specimens, which still contain their skulls, this concavity can be distinctly felt beneath the skin. It is also noticeable that in old *females* the supraorbital crests are almost as well developed, so that the animal is consequently as "cavifrons" as in the *males*.

Altogether the Kiriwina Cuscus, although undoubtedly very closely allied both to the typical *Ph. orientalis* and to subsp. *intercastellanus*, seems sufficiently distinct as a local race to deserve a subspecific name.

The following are the skull-measurements of the adult *male* selected as the type (Brit. Mus. 96.11.5.15):—Extreme length from back of occipital crest 92.3; basal length (*c*) 84; greatest breadth 58; nasals, length 35.5, greatest breadth 13; interorbital breadth 11.6; tip to tip of postorbital processes 12.2; intertemporal breadth 4; palate length 49; palatal foramen 6.2. Horizontal length of \underline{p}^1 48; length of \underline{ms}^{1-2} 15.

Of this form there are a fine pair in the Tring Museum, and three *males* of different ages and an adult *female* in the British Museum.

15. *Perameles* sp. (probably *P. doryana* Quoy & Gaim).

One young specimen. Woodlark Island.

This Bandicoot is unfortunately too young for certain determination.

* This *appears* to be the general course of the colour change, but one fact rather militates against the correctness of the above account, namely, that on the whitish anterior back of the oldest British Museum specimen (the type) some patches of new hairs are coming up *grey*, exactly the reverse of what should be the case. I can at present suggest no explanation of this curious anomaly.